#14/B
AP 4/25/01

CLAIMS

1. A method of producing a plant which shows herbicide resistance, said method comprising:

(i) applying said herbicide to a population of plants, which show segregating resistance to said herbicide in their pollen, such application being at an advanced vegetative state before flowering; wherein the applied herbicide effectively inhibits the pollen lacking the herbicide resistance; such that during flowering such pollen from said plants fertilize the female plant parts with said pollen;

(ii) obtaining herbicide resistance progeny therefrom as seeds and optionally as plants.

2. A method according to claim 1 wherein the herbicide resistant plants are glyphosate resistant, and the herbicide applied in stage (i) is glyphosate.

3. A method according to claim 1 wherein the plants comprise crop plants.

4. A method according to claim 3 wherein the crop plants comprise corn.

5. A method according to claim 4 wherein in step (i), the herbicide is applied at the V5 stage of growth or later.

6. A method according to claim 1 wherein the progeny comprise herbicide resistant hybrid seed.

7. A method according claim 1 wherein the plants contain a further desired transgene.

* 09/100,516

8. A method according to claim 7 wherein the further transgene is a gene which encodes a quality trait which is deliverable by a pollinator.

9. A method according to claim 8 wherein the quality trait comprises a high oil system.

10. A method according to claim 7 wherein the transgene is a fertility/sterility controlling gene.

11. A method according according to claim 10 wherein said fertility/sterility controlling gene is a male sterility gene.

21. A method according to claim 1 wherein said progeny comprise seed.

22. A method according to claim 1 wherein said progeny comprise inbred seed.

23. A method according to claim 2 wherein said progeny comprise glyphosate resistant hybrid seed.

* 09/100,516